

IN THE CLAIMS:

This listing of claims will replace all prior versions of the claims.

Claim 1 (Canceled)

2. (Currently amended) An isolated nucleic acid molecule ~~encoding prostate cancer antigen 3 (PCA3) which functions as a probe or primer for the selective detection of prostate cancer tissue~~ comprising a polynucleotide sequence selected from the group consisting of:

(a) ~~a nucleotide sequence encoding a PCA3 polypeptide comprising the complete amino acid sequence in SEQ ID NO:2;~~

(b) ~~a nucleotide sequence encoding a PCA3 polypeptide comprising the complete amino acid sequence in SEQ ID NO:7;~~

(c) ~~(a) a nucleotide sequence encoding a PCA3 polypeptide comprising the complete amino acid sequence encoded by~~ comprising the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 682.97;

(d) ~~(b) a nucleotide sequence encoding a PCA3 polypeptide comprising the complete amino acid sequence encoded by~~ comprising the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 100521;

(e) (c) a nucleotide sequence comprising the nucleotide sequence set forth in SEQ ID NO:1, 3, 4, or 6;

(f) (d) a nucleotide sequence ~~completely~~ fully complementary to any of the nucleotide sequences in (a), (b), or (c), ~~(d) or (e)~~; and

(g) (e) a nucleotide sequence which hybridizes under high stringency conditions, said high stringency conditions comprising a hybridization at 68°C, in 5x SSC, 5x Denhardt's solution, 1% SDS, and 100 µg/ml denatured salmon sperm DNA, to any of the nucleotide

sequences in (a), (b), (c), or (d), ~~(e) or (f)~~, wherein said nucleotide sequence does not hybridize to nucleotides 511-985 of SEQ ID NO:1 or to nucleotides 533-1007 of SEQ ID NO:6;

wherein said nucleotide sequence in (a)-(e) selectively hybridizes to one or more polynucleotides over-expressed in prostate cancer tissue as compared to one or more normal human tissues selected from the group consisting of artery, brain, breast, duodenum, heart, liver, ovary, placenta, seminal vesicles, skeletal muscle, skin, spinal cord, spleen and testis, as measured by RT-PCR; and
further, wherein said nucleotide sequence in (a) - (e) functions as a probe, or primer for the selective detection of prostate cancer tissue.

Claim 3 (Canceled)

4. (Currently amended) An isolated nucleic acid molecule ~~encoding prostate cancer antigen-3 (PCA3)~~ comprising the nucleotide sequence set forth in SEQ ID NO:1, 3, 4, or 6.

5. (Previously presented) The isolated nucleic acid molecule according to claim 4, wherein the molecule encodes the polypeptide comprising the complete amino acid sequence set forth in SEQ ID NO:2 or 7.

6. (Currently amended) The isolated nucleic acid molecule according to claim 2, wherein the nucleotide sequence encodes a PCA3 polypeptide comprising the complete amino acid sequence encoded by the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 682.97, ~~respectively~~.

7. (Currently amended) The isolated nucleic acid molecule according to claim 2, wherein the nucleotide sequence encodes a PCA3 polypeptide comprising the complete

amino acid sequence encoded by the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 100521, ~~respectively~~.

8. (Currently amended) An isolated nucleic acid molecule consisting of 10 to 50 nucleotides which specifically hybridizes to PCA3 RNA or DNA ~~encoding PCA3~~, wherein said nucleic acid molecule is, or is complementary to a nucleotide sequence consisting of at least 10 consecutive nucleotides from PCA3 exon 1, 2, 3, 4a, 4b, 4c, or 4d, wherein said nucleic acid molecule does not specifically hybridize to nucleotides 511-985 of SEQ ID NO:1, ~~to nucleotides 567-961 of SEQ ID NO:1~~, to nucleotides 533-1007 of SEQ ID NO:6 ~~or to nucleotides 589-983 of SEQ ID NO:6~~.

9. (Original) A method of detecting PCA3 nucleic acid in a sample comprising:

- a) contacting said sample with the nucleic acid molecule according to claim 8, under conditions such that hybridization occurs, and
- b) detecting the presence of said molecule bound to PCA3 nucleic acid.

10. (Original) A kit for detecting the presence of PCA3 nucleic acid in a sample comprising at least one container means having disposed therein the nucleic acid molecule according to claim 8.

11. (Previously presented) A recombinant nucleic acid molecule comprising, 5' to 3', a promoter effective to initiate transcription in a host cell and the nucleic acid molecule according to claim 2.

12. (Previously presented) A recombinant nucleic acid molecule comprising a vector and the nucleic acid molecule according to claim 2.

13. (Original) A cell that contains the recombinant nucleic acid molecule according to claim 11.

14. (Original) A non-human organism that contains the recombinant nucleic acid molecule according to claim 11.

Claims 15-23 (Canceled)

24. (Previously presented) A recombinant nucleic acid molecule comprising, 5' to 3', a promoter effective to initiate transcription in a host cell and the nucleic acid molecule according to claim 4.

25. (Previously presented) A recombinant nucleic acid molecule comprising a vector and the nucleic acid molecule according to claim 4.

26. (Previously presented) A cell that contains the recombinant nucleic acid molecule according to claim 25.

27. (Previously presented) An isolated nucleic acid molecule comprising the polynucleotide sequence set forth from nucleotides 401 to 553 of SEQ ID NO:6.

28. (Previously presented) The isolated nucleic acid molecule of claim 27, wherein said polynucleotide sequence encodes the complete amino acid sequence as set forth in SEQ ID NO:7.

29. (Currently amended) The isolated nucleic acid molecule according to claim 4, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:1 or 6.

30. (Currently amended) The isolated nucleic acid molecule according to claim 29, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO: 6.

31. (Currently amended) The isolated nucleic acid molecule according to claim 4, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:1.

32. (Currently amended) The isolated nucleic acid molecule according to claim 4, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:3.

33. (Currently amended) The isolated nucleic acid molecule according to claim 4, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:4.

34. (Currently amended) The recombinant nucleic acid molecule according to claim 24, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:6.

35. (Currently amended) The recombinant nucleic acid molecule according to claim 25, wherein the molecule comprises the nucleotide sequence ~~encoding PCA3~~ as set forth in SEQ ID NO:6.

36. (Previously presented) A cell that contains the recombinant nucleic acid molecule according to claim 35.

37. (Previously presented) A recombinant nucleic acid molecule comprising a vector and the nucleic acid molecule according to claim 27.

38. (Previously presented) A cell that contains the recombinant nucleic acid molecule according to claim 37.

39. (New) An isolated nucleic acid molecule which functions as a probe or primer for the selective detection of prostate cancer tissue comprising a polynucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence comprising the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 682.97;

(b) a nucleotide sequence comprising the polynucleotide clone contained in the deposit at the Centraal voor Schimmelcultures as accession number CBS 100521;

(c) a nucleotide sequence comprising the nucleotide sequence set forth in SEQ ID NO:1, 3, 4, or 6;

(d) a nucleotide sequence fully complementary to any of the nucleotide sequences in (a), (b), or (c); and

(e) a nucleotide sequence which hybridizes under high stringency conditions, said high stringency conditions comprising a hybridization at 68°C, in 5x SSC, 5x Denhardt's solution, 1% SDS, and 100 µg/ml denatured salmon sperm DNA, to any of the nucleotide sequences in (a), (b), (c), or (d), wherein said nucleotide sequence does not hybridize to nucleotides 511-985 of SEQ ID NO:1 or to nucleotides 533-1007 of SEQ ID NO:6;

wherein said nucleotide sequence in (a)-(e) selectively hybridizes to one or more polynucleotides over-expressed in prostate cancer tissue as compared to one or more human prostate cancer cell lines selected from the group consisting of ALVA-31, JCA-1 and PPC-1 ;
and

further wherein said nucleotide sequence in (a) - (e) functions as a probe, or primer for the selective detection of prostate cancer tissue.

40. (New) A recombinant nucleic acid molecule comprising, 5' to 3', a promoter effective to initiate transcription in a host cell and the nucleic acid molecule according to claim 39.

41. (New) A recombinant nucleic acid molecule comprising a vector and the nucleic acid molecule according to claim 39.

42. (New) A cell that contains the recombinant nucleic acid molecule according to claim 41.

43. (New) A non-human organism that contains the recombinant nucleic acid molecule according to claim 41.

44. (New) The isolated nucleic acid molecule of claim 2, wherein the nucleotide sequence in e) is a nucleic acid sequence molecule consisting of 10 to 50 nucleotides.

45. (New) The isolated nucleic acid molecule of claim 39, wherein the nucleotide sequence in e) is a nucleic acid sequence molecule consisting of 10 to 50 nucleotides.

REMARKS

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 2, 4-14 and 24-45 are pending in the application, with claims 2, 4, 8, 27 and 39 being the independent claims. Claims 2, 4, 6, 7, 8, 29-35 are sought to be amended and new claims 39-45 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Applicants thank the Examiner for entering Applicants submission of April 11, 2003 upon filing the RCE on July 01, 2003.

The Specification has been amended at page 7 to further clarify that the palindromic region recognized by the restriction enzyme EcoRI, is a double stranded region of 6 nucleotides. Being of less than 10 unbranched nucleotides, the filing of an additional